

# **[ CONDUCTIVITY SENSOR FOR DETECTING CONDUCTIVITY OF A FLUID ]**

## **Abstract of Disclosure**

A conductivity sensor (16) and control circuit (18) for determining the conductivity of a fluid is provided. Conductivity sensor (16) is formed of a first annular electrode (24) spaced apart from a second annular electrode (26) having a tubular portion (28) therebetween. The first annular electrode (24) and the second annular electrode (26) are coupled to a control circuit (18). The control circuit (18) preferably includes a square wave generating circuit (40), a current-to-voltage converter circuit (42) coupled to one of the electrodes, a buffer circuit (44) coupled to the other one of the electrodes, a synchronous detector circuit (46). The synchronous detector circuit (46) is operated using the square wave from square wave generator circuit (40). By oscillating between a negative and positive gain, a constant direct current output corresponding to the conductivity of the fluid between the first annular electrode and second annular electrode is provided.

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## Figures

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